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REPORT

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Addendum to the MCP Supplemental Phase II Report for the Allendale School Property

Vol. I of III

General Electric Company
Pittsfield, Massachusetts

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BBL
BLASLAND, BOUCK & LEE, INC.
engineers & scientists

Table of Contents

1 Introduction

1.1 General

This *Addendum to the MCP Supplemental Phase II Report for the Allendale School Property* (Addendum) summarizes the activities performed by the General Electric Company (GE) over the last several months concerning the presence of polychlorinated biphenyls (PCBs) and other hazardous constituents at the Allendale School Property in Pittsfield, Massachusetts (Site No. l-0960). This Addendum has been prepared consistent with the proposed activities outlined in the *MCP Supplemental Phase II Report for the Allendale School Property* (Supplemental Phase II Report), dated August 1997 (Blasland, Bouck & Lee. Inc. - BBL), as conditionally approved by the Massachusetts Department of Environmental Protection (MDEP) via letter dated December 24, 1997.

This Addendum is the third investigation report completed to date for the Allendale School Property under the provisions of the Massachusetts Contingency Plan (MCP) (310 CMR 40.0000). Two previous reports, entitled *MCP Interim Phase II Report for the Allendale School Property* (Interim Phase II Report), dated January 1993 (Blasland & Bouck Engineers, P.C. - Blasland & Bouck). and the Supplemental Phase II Report, referenced above, provide a significant volume of information toward the characterization of current site conditions, and contain information sufficient to satisfy MCP requirements concerning the investigation component of an MCP Phase II Comprehensive Site Assessment. The information previously presented in these reports is incorporated by reference herein. In addition, select figures from the prior reports have been incorporated into this Addendum, and various figures prepared as part of this Addendum also incorporate the prior analytical data.

1.2 Background/ Investigation History

As previously documented in the Supplemental Phase II Report, the Allendale School Property is located to the north of the GE facility across the Tyler Street Extension. and is bordered on the other three sides by residential areas (Figure 1). The school occupies approximately 30,000 square feet on approximately 12 acres. At the time of the school's construction in 1950, GE and the City of Pittsfield entered into an agreement under which GE allowed the City to remove soil material from GE property for use as fill material at the school property.

Concerns associated with the Allendale School Property were initially identified by the MDEP during construction of the Pittsfield Generating Company Facility (PGC Facility, formerly known as the Altresco Corporation Cogeneration Facility), located on GE property southeast of the school property. The presence of PCBs in soil at the GE property, and the available information concerning the prior use of fill material at the property, led to MDEP

concerns regarding the potential presence of PCBs in the fill at the Allendale School Property. In response the MDEP performed a soil and surface water sampling program for this area in January 1990, from which low levels of PCBs were detected in the surficial soils in the southeast comer of the Allendale School Property. The MDEP subsequently established a PCB concentration of 2 parts per million (ppm) (dry weight) as the "level of concern" for surficial soils in this area. Two soil samples collected from the school property by the MDEP exceeded this concentration; surface water sampling results did not detect PCBs.

The detection of PCBs above 2 ppm in soils by the MDEP at the property led to several subsequent sampling events by GE to characterize the presence and extent of PCBs, as well as to assess the potential presence of other hazardous constituents at the site. These activities were conducted between April and September 1990. As a result of these investigations, GE evaluated a range of options to reduce the potential for human contact with soils containing PCBs above the MDEP's level of concern (i.e., 2 ppm). GE's evaluation was presented in a document entitled ***Study of Potential Remedial Options for PCB-Containing Soils at the Allendale School Property*** (Blasland & Bouck, September 1990). In a March 15, 1991 letter to GE, the MDEP conditionally approved the containment/capping option presented in that report as an MCP Short-Term Measure (STM). As conditionally approved by the MDEP, the STM involved the placement of a geotextile layer overlain with a minimum of 2 feet of "clean" soil over those areas where soil PCB concentrations exceeded 2 ppm within the top 3 feet of existing soil. In addition, improvements to the existing surface water drainage system in the area were part of the STM. The MDEP's approval conditions were incorporated into a revised version of the report entitled ***Study of Potential Remedial Options for PCB-Containing Soils at the Allendale School Property*** (Blasland & Bouck, April 1991). Construction activities were initiated and completed in the summer of 1991, in accordance with the STM approved by the MDEP.

In a letter dated March 6, 1992, the MDEP classified the Allendale School Property as a priority disposal site under the MCP, required that further remedial response action be performed, and required that a Scope of Work (SOW) for a Phase II Comprehensive Site Assessment be submitted. On May 4. 1992, GE submitted to the MDEP the ***Allendale School Property MCP Phase II Scope of Work*** (Blasland & Bouck. May 1992) to address data needs associated with the Phase II Comprehensive Site Assessment. The activities proposed in that document were conditionally approved by the MDEP in a letter dated June 30, 1992 and subsequently initiated.

In January 1993, GE submitted an Interim Phase Ⅱ Report to the MDEP. On September 13, 1996, after review of that document, the MDEP directed GE to: (a) submit an Imminent Hazard Evaluation Proposal for surface and near-

surface soil sampling and analysis at the Allendale School Property to evaluate whether a potential "imminent hazard" exists; (b) submit thereafter a Supplemental Phase II SOW proposing additional investigations and (c) upon completion of the additional investigations, submit a Supplemental Phase II Report for the property. On September 27, 1996, GE submitted an *Imminent Hazard Evaluation Proposal for the Allendale School Property* (BBL, 1996), which was conditionally approved by the MDEP in a letter dated October 10, 1996. On November 18, 1996, GE submitted the Supplemental Phase II SOW. which was conditionally approved by the MDEP in a letter dated March 5, 1997.

In support of the imminent hazard evaluation, GE collected soil samples from the surface (0- to 6-inches) and near-surface (6- to 12-inches) from 114 grid node locations based on a 50-foot grid. Concentrations of PCBs were greater than 2 ppm in only two (AS-96-76 and AS-96-80) of the 114 locations, at both the 0- to 6-inch and 6- to 12-inch intervals. None of the 114 surface samples had PCB concentrations greater than the MCP potential imminent hazard threshold of 10 ppm, and only one of the near-surface samples had a PCB concentration greater than 10 ppm (16 ppm, location AS-96-80. 6- to 12-inch interval). On December 6. 1996, GE submitted the Imminent Hazard Evaluation Report. Based on the available information, GE concluded that a potential imminent hazard as defined in the MCP (310 CMR 40.0321(2)(b)) did not exist at the schoolyard.

In April 1996, Gifford Engineering, on behalf of Barry Architects, Inc.. and at the direction of the City of Pittsfield. installed seven borings within the Allendale School Property. Soil samples were collected primarily for structural purposes in support of proposed additions to the school building and were not specifically collected as part of the Phase II investigation. However, soil samples from the top 4 feet at two borings were submitted for PCB analysis The results indicated that PCBs were not present at concentrations above 2 ppm.

In August 1996, Gifford Engineering installed 13 additional borings, again in conjunction with activities associated with proposed additions to the school building (Gifford Engineering. 1996). Soil samples were collected from the 0- to 0.5-foot and 0.5- to 2-foot depth intervals, and thereafter in 2-foot increments to depths of up to 10 feet. Analytical results from the 52 samples collected indicated PCB concentrations less than 2 ppm, with the exception of 4 subsurface samples, which had PCB concentrations ranging from 2.7 to 24 ppm.

In April 1997, GE advanced 26 additional soil borings in the vicinity of the proposed building expansion prior to the start of the City of Pittsfield's excavation efforts (see Figure 4). The borings were sampled at 2-foot intervals to depths at least 2-feet beyond the extent of fill as determined based on historical topographic mapping predating

the construction of the school. PCBs were not detected in 63 of the 91 samples submitted for analysis. One sample (PRE-24 at a depth of 4- to 6-feet) exhibited a PCB concentration of 11 ppm. The remaining samples in which PCBs were detected exhibited concentrations of 1 ppm or less. The soils in the general vicinity of sample PRE-24 (4- to 6-feet) were then excavated (see Figure 4). The first 3 feet of soil were removed and stockpiled for later use at the site. The next 4 feet of soil (3- to 7-foot depth interval) were removed, transported to a temporary staging area at GE Building 33 Yard, and transported to High Acres Disposal Facility in Fairport, New York. Approximately 400 tons of soil were removed as part of this excavation activity. Additionally. based on soil boring data generated by Gifford Engineering and GE (as illustrated on Figures 2 and 5) a second excavation was completed for the installation of a new 3,000 gallon grease trap and sanitary drainage pipeline located on the west side of the school (see Figure 4). The trap and pipeline were installed and clean fill was used for backfill. Approximately 300 tons of soil were excavated during this activity. All soil excavated during the installation of the trap and sanitary piping was transported to a temporary staging area at GE Building 33 Yard, and transported to High Acres Disposal Facility in Fairport, New York.

In April 1997, the City of Pittsfield removed two underground storage tanks located along the western side of the main school building on the Allendale School Property. GE collected two soil samples from locations beneath each of the former tanks at the base of the excavation. These samples were collected as grab samples from the 0- to 6-inch depth interval beneath the former tanks, and submitted for PCB analysis. The soil samples had PCB concentrations of 0.86 ppm and 0.059 ppm.

GE submitted the Supplemental Phase II Report to the MDEP on August 1, 1997. Several data needs were identified regarding the soil and groundwater results. and various activities were proposed to address them. On December 24, 1997, the MDEP conditionally approved the Supplemental Phase II Report and the additional activities proposed in that report. In addition, MDEP directed GE to: (a) submit a proposal for determining the extent of soils with PCB concentrations greater than 2 ppm along the eastern edge of the cap: (b) submit thereafter a plan indicating the area proposed for limited removal, demonstrating that upon completion, no soil containing PCB concentrations greater than 2 ppm shall remain outside of the capped area within the top three feet of the ground surface; and (c) submit a supplement including laboratory data analytical summary sheets from the 1996-1997 investigations and a summary of the data evaluation of those data sets (using the Tier I/Tier II data evaluation process outlined in the SAP/DCAQAP).

On January, 22, 1998, GE submitted a report entitled *Analytical Data Validation Report for the Allendale School Property* (BBL, January 1998). that evaluated the 1996-1997 analytical data set and compiled the analytical summary data sheets. At the same time, GE also submitted a *Proposal for Supplemental Soil Investigation* which was conditionally approved by the MDEP in a letter dated February 17, 1998. GE promptly initiated field activities to address data needs remaining from previous studies and to delineate the areas outside of the existing cap which would be included in limited soil removal actions. A *Remedial Action Work Plan for Limited Soil Removal at Allendale School (MCP Site No. l-0960)* (Remedial Action Work Plan -- BBL. March 1998) was submitted in March 1998 and was conditionally approved by the MDEP in a letter dated April 9. 1998. Limited removal of 1600 cubic yards of impacted soil was performed during the week of April 20, 1998, as a continuation of the 1991 STM.

In February and March 1998, Supplemental Phase II investigation activities were performed. In general. those Supplemental Phase II activities included sampling and analysis of soils, installation of several piezometers. sampling and analysis of groundwater, and an analysis of groundwater flow at the site. In accordance with the Supplemental Phase II Report and the MDEP's December 24. 1997 conditional approval letter, this report summarizes those Supplemental Phase II activities.

1.3 Format of Document

The remainder of this Addendum summarizes each of the activities completed to date by GE, as proposed in the Supplemental Phase II Report, and as conditionally approved in subsequent correspondence from the MDEP. The results of previous and recent investigations are discussed, as appropriate, in association with data that were presented in prior reports. The remainder of this report follows a format consistent with the previous Supplemental Phase II Report. The specific contents are as follows:

- Section 2 of this document provides a summary of the supplemental soil investigations for the Allendale School Property. The soil sampling effort was conducted to further define the horizontal and vertical extent of PCBs and fill materials at the property and obtain additional information on the presence of other non-PCB hazardous constituents at the property.

- Section 3 describes the additional supplemental groundwater investigations, including the installation of several piezometers, groundwater sampling and analysis involving the new piezometers and certain existing wells, and construction of a revised groundwater table contour map.

- Section 4 provides an overall evaluation of the project objectives and an overview of the analytical results obtained during the additional investigation as they relate to the project objectives.

- Section 5 summarizes the results of analytical data validation of the sample data collected during February and March, 1998.